

Patent claims:

1. A blocking apparatus for blocking and/or sealing
off a line for transporting - preferably hot - media,
5 in particular dust-laden gases, preferably for blocking
and/or sealing off a line for transporting hot gases
which may be laden with solid particles, having a
movable closure body (2) and at least one sealing
element (9), in particular a seat ring, against which
10 the closure body bears in the blocking position, and
having a device for rotating the closure body (11)
about an axis of rotation, in particular a shaft, to
which the closure body is connected, characterized in
that the closure body, by means of a suitable flexible
15 linkage to the device for rotating the closure body, is
mounted such that it can move in the direction of the
axis of rotation and/or in a direction which is
perpendicular with respect thereto, such that it slides
on the sealing element.

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2. The blocking apparatus as claimed in claim 1,
characterized in that a - preferably flexible - seal
(13), in particular a bellows, which on the one hand is
connected to the device for rotating the closure body
25 (11) and on the other hand is connected to the closure
body (2), in each case in such a manner that the
connecting location between the closure body and the
device which rotates it can be sealed off by the seal,
is arranged at the device for rotating the closure body
30 (11).

3. The blocking apparatus as claimed in claim 2, in
which the closure body (2) on one side has a recess
(12) in which the device for rotating the closure body
35 (11), in particular the shaft, engages, characterized
in that the seal (13), in particular the bellows, is
arranged in such a manner that it is possible to
prevent solid particles from being introduced into the

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recess (12) in the closure body (2), in particular in the region where the device for rotating the closure body engages in the recess in the closure body.

- 5 4. The blocking apparatus as claimed in claim 2 or 3, characterized in that the seal (13) at least partially seals off, in a gastight manner, the front part, facing the closure body (2), of the device for rotating the closure body, in particular the shaft.
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5. The blocking apparatus as claimed in one or more of claims 2 to 4, characterized in that a cavity (14), in particular a bore, which has at least two openings, a first opening being arranged in the front part,
- 15 facing the closure body (2), of the device for rotating the closure body, in particular the shaft (11), is provided at the device for rotating the closure body, in particular the shaft (11).
- 20 6. The blocking apparatus as claimed in claim 5, characterized in that the first opening is arranged in the region of the sealed connection between the closure body and the device which rotates the closure body.
- 25 7. The blocking apparatus as claimed in claim 5 or 6, characterized in that a second opening of the cavity can be closed off, in particular in a gastight manner, by a closure.
- 30 8. The blocking apparatus as claimed in one or more of claims 1 to 7, characterized in that the position and/or location of the closure body (3), preferably in the direction of the shaft axis, can be altered by a spacer (10) which acts in particular on the closure
- 35 body at a point in the direction of the shaft axis and can be actuated, in particular hydraulically, during operation.

9. The blocking apparatus as claimed in one or more of claims 1 to 8, in which the closure body (2) is of at least partially spheroidal and rotatable design and if appropriate has a through-flow passage.

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10. The blocking apparatus as claimed in one or more of claims 1 to 9, having in each case one inlet connection piece (3) and outlet connection piece (4), arranged at the corresponding end of the blocking valve and if appropriate aligned with one another, which each have an external and internal diameter, characterized in that the external diameter is formed by a metallic shell (5) and the internal diameter is formed by an - optionally metallic - inliner (6), an insulating material (7) for thermal insulation, in particular a refractory material, particularly preferably a refractory lining made from refractory material, being arranged between the inliner (6) and the metallic shell (5).

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11. The blocking apparatus as claimed in claim 10, characterized in that a connecting element (8), for supporting the inliner (6) on the metallic shell (5), is provided between the metallic shell (5) and the inliner (6), preferably in the region of the blocking valve, and if appropriate the connecting element (8) bears against the sealing element (9) and at least partially supports the latter.

12. The blocking apparatus as claimed in claim 10 or 11, characterized in that a fixing element (17), for example a disk spring, is provided, by means of which the sealing element (9) is flexibly and/or resiliently mounted.

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13. A method for operating a blocking apparatus for blocking and/or sealing off a line for transporting - preferably hot - media, in particular dust-laden gases, preferably for blocking and/or sealing off a line for

transporting hot gases which may be laden with solid particles, having a movable closure body (2) and at least one sealing element (9), in particular a seat ring, against which the closure body is placed when the line is being blocked, and having a device for actuating the closure body (11), in particular a shaft, to which the closure body is connected and by means of which the closure body is actuated and placed against the sealing element when the line is being blocked by rotation about an axis of rotation, characterized in that the closure body, by means of a suitable flexible linkage to the device for actuating the closure body, is moved in the direction of the axis of rotation and/or in a direction which is perpendicular with respect thereto, such that it slides freely on the sealing element.

14. The method as claimed in claim 13, characterized in that the connecting location between the closure body and the device for actuating the closure body is sealed off with respect to the environment, in particular so as to prevent the ingress of impurities, by a - preferably flexible - seal, in particular a bellows.

15. The method as claimed in claim 13 or 14, characterized in that a cavity, in particular a bore, which has at least two openings, a first opening being arranged in the front part, facing the closure body, of the device for actuating the closure body, in particular the shaft, is arranged at the device for actuating the closure body, in particular the shaft.

16. The method as claimed in claim 15, characterized in that the first opening is arranged in the region of the sealed connection between the closure body and the device which actuates it.

17. The method as claimed in claim 15 or 16, characterized in that a second opening of the cavity is closed off, in particular in a gastight manner, by a closure.

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18. The method as claimed in one or more of claims 15 to 17, characterized in that the cavity is filled by a medium at a higher pressure than the ambient pressure surrounding the blocking apparatus.

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19. The method as claimed in claim 18, characterized in that the medium in the cavity is held substantially at a constant pressure level which is above the ambient pressure surrounding the blocking apparatus.

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20. The method as claimed in one or more of claims 13 to 19, characterized in that the location and/or position of the closure body is altered in the direction of the axis of rotation and/or in a direction which is perpendicular with respect thereto, in particular during operation of the blocking apparatus, by a - preferably hydraulic - spacer.

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